

REMARKS

Applicant notes with appreciation the withdrawal of the previous ground of rejection of claims 19–27 under 35 U.S.C. §101.

Claims 1–3 and 5–27 remain pending in the application. Claim 20 has been amended to correct a grammatical error. Claim 23 has been amended to correct the error noted by the Examiner such that it now depends from claim 19. Claim 4 has been cancelled, the subject matter of which has been incorporated into independent claims 1, 10 and 19. No new matter has been introduced.

Claims 1–4, 7–13, 16–22 and 25–27 have been rejected under 35 U.S.C. §103 as being unpatentable over U.S. Patent 6,002,782 to Dionysian in view of U.S. Publication 2001/0020946 of Kawakami et al. Claims 5, 6, 14, 15, 23, and 24 have been rejected under 35 U.S.C. §103 as being unpatentable over Dionysian in view of Kawakami et al., and further in view of U.S. Patent 6,956,569 to Roy et al. These grounds of rejection are respectfully traversed in view of the amendments above, the remarks of record and further remarks below.

As noted in the previous response of record, Dionysian fails to teach the features/functions that the Examiner has attributed to it. For example, the portion cited by the Examiner (column 4, lines 29–58) as rendering obvious the limitation “pose candidate deciding means for generating a plurality of pose candidates,” actually describes transforming co-ordinate axes, i.e., rotating the “access image” of a person to the same orientation as the “model” image of the person that was previously stored. According to Dionysian, the “model” image, and the orientation at which it was obtained, are stored and retrieved according to the person’s assigned personal identification number (PIN). Reading Dionysian in its entirety, Dionysian discloses rotating the access image to align with the “model” by first measuring the angle of rotation and then, based on that measurement, performing the co-ordinate transformation. While Dionysian may teach performing the measurement by identifying features or contours, and then solving a system of equations (see Figure 7

in Dionysian), Dionysian teaches nothing of generating a plurality of pose candidates. Neither Kawakami et al. nor Roy et al. mitigates the deficiencies of Dionysian, admitted or otherwise. With regard to Kawakami et al., the Examiner asserts that Kawakami et al. teach the correcting features of the claimed invention (originally in claim 4; now incorporated into claims 1, 10 and 19). However, as discussed in paragraphs 0080–0087 in Kawakami et al., the “correction” applied in Kawakami et al. is performed in a different manner than the correcting means of the claimed invention. In particular, Kawakami et al. disclose a process of searching for a difference being smaller than a threshold, the difference being a difference between a model texture image g_m and a generated (normalized) texture image g_s . This is achieved by repeatedly correcting parameters (model parameter c , pose parameter t , light source parameter u) (see paragraphs 0079–0087 in Kawakami).

Assuming *arguendo* that the Kawakami et al. process is similar to the process of the image comparing means of the present invention (i.e., searching for either the distance value between a comparison image generated from different pose candidates and a reference image is minimized, or the similarity degree between a comparison image generated from different pose candidates and a reference image is maximized), independent claims 1, 10 and 19 have been amended to emphasize a process of correcting *either* a minimum distance value or a maximum similarity degree determined by an image comparing means. More specifically, claim 1 recites:

“image comparing means for determining one of a minimum distance value and a maximum similarity degree between the reference image and the generated comparison images; and

“correcting means for correcting, based on the correction coefficient, one of the minimum distance value and the maximum similarity degree determined by the image comparing means . . .”

As such, the correcting function of the claimed invention, as amended, is clearly unobvious from the corrections being made in Kawakami et al., which *repeatedly* correct *all* available parameters (e.g., model parameter c , pose parameter t , light

source parameter u). Further, the correction coefficient is determined and stored specifically for a reference image *before* executing a comparing process. Accordingly, the claimed invention, as amended, is sufficiently distinguishable from either Dionysian or Kawakami et al., alone or in combination.

With regard to Roy et al., the Examiner cites to this reference as rendering a weighting coefficient storing means for storing a weighting coefficient obvious in view of the teachings in Dionysian and Kawakami et al. Roy et al. use a “weighted” sum of samples in each bucket and uses the sum as an error measure in order to rank models (see column 6, lines 57–60 in Roy et al.). However, Roy et al. fail to teach or suggest using a weighting coefficient that corresponds to a reference image. As such, the publication of Roy et al. is not properly combinable with either Dionysian or Kawakami et al. to render obvious any claim of the present invention.

For the foregoing reasons, it is clear that none of the cited references, either alone or in combination, teach or suggest the features of the claimed invention, especially independent claims 1, 10 and 19 as amended. Thus, it is respectfully requested that the application be reconsidered, that claims 1–3 and 5–27 be allowed, and that the application be passed to issue.

Since all rejections, objections and requirements contained in the outstanding official action have been fully answered and shown to be in error and/or inapplicable to the present claims, it is respectfully submitted that reconsideration is now in order under the provisions of 37 C.F.R. §1.111(b) and such reconsideration is respectfully requested. Upon reconsideration, it is also respectfully submitted that this application is in condition for allowance and such action is therefore respectfully requested.

A provisional petition is hereby made for any extension of time necessary for the continued pendency during the life of this application. Please charge any fees for such provisional petition and any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 50-2041 (Whitham, Curtis, Christofferson & Cook).

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'C. Lamont Whitham', is written over the typed name.

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